UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,476	12/18/2000	Kavitha Vallari Devara	US 000397	4016

24737 7590 10/22/2004	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS	SHANNON, MICHAEL R	
P.O. BOX 3001		
BRIARCLIFF MANOR, NY 10510	ART UNIT	PAPER NUMBER
	2614	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *12/18/00, 10/11/02*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference character(s) not mentioned in the

description: 20. Corrected drawing sheets, or amendment to the specification to add

the reference character(s) in the description, are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by

Register et al (US Pat. No. 5,371,807), cited by examiner.

With regards to claim 1, the claimed method for classification of a program is met

as follows: The claimed step of receiving transcript information associated with the

program is met by Figure 3, reference number 24, which received input text from the

application for processing. The claimed step of identifying at least one cue of a plurality

of cues in the transcript information, each of the plurality of cues having associated

therewith a type of program is met by the Natural Language Module 32, which

recognizes key words using the domain-specific knowledge base 20 and the lexicon of

keywords 52. The claimed step of correlating the at least one cue of the plurality of

cues identified in the transcript information to the type of program is met by the similarity

measuring module 36, which uses the "Keyword → category profiles" section 56 to map

a certain keyword to a similar category. The step of classifying the program based on

the correlation of the at least one cue of the plurality of cues identified in the transcript

information is met by the category disambiguation module 38, which uses the category

selection rule base 58 to select the appropriate category and classification for the cue

which was extracted from the transcript.

With regards to claim 6, the claimed apparatus for classification of a program is

met as follows: The claimed transcript information extractor for extracting transcript

information associated with the program from an audio/data/video input signal is met by

the Natural Language Module 32, which is used to extract keywords using the lexicon of

keywords 52 from the input text data signal. The claimed cue extractor for identifying at

least one cue of a plurality of cues in the transcript information, each of the plurality of

cues having associated therewith a type of program is met by the Natural Language

Module 32, which is, again, used to extract the keywords using the lexicon of keywords

52. The keywords having an associated type of program is met by the Intelligent

Inferencer Module 34 and the Similarity Measuring Module 36, which both serve to

associate keywords/cues with associated facts and category profiles. The claimed

knowledge database for correlating the at least one cue of the plurality of cues identifies

in the transcript information to the type of program is met by the "Keyword → Category

Profiles" system 56, which serves, within the Knowledge Base 20, to associate and

correlate the extracted keywords/cues with the appropriate categories. The claimed

classifier for classifying the program based on the correlation of the at least one cue of

the plurality of cues identified in the transcript information is met by the category

disambiguation module 38 and the category selection rule base 58, which serve to

output the appropriate classification based on a set of rules and the keywords extracted

from the transcript information.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 2-4 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Register et al (US Pat. No. 5,371,807), cited by examiner, in view of Wei et al,

cited by applicant.

With regards to claim 2, Register teaches all of that which is discussed above

with regards to claim 1. Register does not expressly disclose the step of receiving an

audio/data/video signal which includes the transcript information. The claimed step of

step of receiving an audio/data/video signal which includes the transcript information is

met by Wei, page 1345, section 1, wherein he discloses the step of receiving an

audio/video feed and extracting the transcript from the received audio/video feed. It

would have been obvious to one of ordinary skill in the art at the time of the invention to

incorporate the audio/data/video feed as taught by Wei into the text classification

system taught by Register, in order to allow audio and video information to be classified

in the same way that Register classifies simple text information. The overall system

would have benefited from the ability to classify videos and to quickly and easily

organize and retrieve video information based on automatic classification.

With regards to claim 3, Register teaches all of that which is discussed above

with regards to claim 1. Register does not expressly disclose any of the steps of noting

a time and comparing the time. Wei meets all of the claimed limitations of claim 3. The

claimed step of noting a time of occurrence during the program of the at least one cue

and a second cue is met by the trajectory being used in the text tracking method of Wei

(section 2.2). Wei utilizes a "text tracking" to track text and to consider the text if it falls

into an appropriate trajectory. In section 3.1, he states, "the number and average

duration of the 'survived' trajectories constitute additional dimensions in the feature

space." The claimed step of comparing the time of occurrence of the at least one cue

and the second cue to determine a proximity of occurrence of the at least first cue and

second cue is met by the same trajectory, which samples different text trackings and

establishes, based on duration and number, if they should be utilized. The claimed

feature of the proximity of occurrence being greater than a predetermined amount

means that the first and second cues are ignored in connection with determining the program classification is met by the trajectory and the claimed feature of the proximity of occurrence being less than a predetermined amount means that the first and second cues are utilized in connection with determining the classification is also met by the trajectory, which uses the number and average duration to establish which text trackings are utilized for classification. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the trajectory teachings of Wei in the system of Register in order to allow for biased and slanted text analyses to be ignored, so as not to misinterpret the classification of the video program.

With regards to claim 4, Register teaches all of that which is discussed above with regards to claim 1. Register does not expressly disclose which types of program classifications can be used. He does disclose a domain-specific knowledge base, which categorizes based on information in the knowledge base, which can be video program related. The claimed classification of the program being one of a news program, talk show, sports program, panel discussions, interviews, and situational comedy is met by Wei, wherein he teaches four categories, namely news, commercial, sitcom, and soap (page 1345, paragraph 4). He also suggests that the system can be extended to recognize more categories by adding new classification rules. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the classification rules as taught by Wei in the system as taught by Register, in order to allow the domain-specific knowledge base to utilize pertinent classifications and to properly classify video information.

With regards to claim 7, Register teaches all of that which is discussed above with regards to claim 6. Register does not expressly disclose noting a time occurrence of a first and second cue during the program, a temporal database for comparing the times, or the actions to take once the times are compared. Wei meets all of the claimed limitations of claim 6. The claimed step of noting a time of occurrence during the program of the at least one cue and a second cue is met by the trajectory being used in the text tracking method of Wei (section 2.2). Wei utilizes a "text tracking" to track text and to consider the text if it falls into an appropriate trajectory. In section 3.1, he states, "the number and average duration of the 'survived' trajectories constitute additional dimensions in the feature space." The claimed temporal database used to compare the time of occurrence of the at least one cue and the second cue to determine a proximity of occurrence of the at least first cue and second cue is met by the same trajectory, which samples different text trackings and establishes, based on duration and number, if they should be utilized. The claimed feature of the proximity of occurrence being greater than a predetermined amount means that the first and second cues are ignored in connection with determining the program classification is met by the trajectory and the claimed feature of the proximity of occurrence being less than a predetermined amount means that the first and second cues are utilized in connection with determining the classification is also met by the trajectory, which uses the number and average duration to establish which text trackings are utilized for classification. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the trajectory teachings of Wei in the system of Register in order to allow for biased and

slanted text analyses to be ignored, so as not to misinterpret the classification of the video program.

With regards to claim 8, Register teaches all of that which is discussed above with regards to claim 6. Register does not expressly disclose which types of program classifications can be used. He does disclose a domain-specific knowledge base, which categorizes based on information in the knowledge base, which can be video program related. The claimed classification of the program being one of a news program, talk show, sports program, panel discussions, interviews, and situational comedy is met by Wei, wherein he teaches four categories, namely, news, commercial, sitcom, and soap (page 1345, paragraph 4). He also suggests that the system can be extended to recognize more categories by adding new classification rules. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the classification rules as taught by Wei in the system as taught by Register, in order to allow the domain-specific knowledge base to utilize pertinent classifications and to properly classify video information.

6.   Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Register et al (US Pat. No. 5,371,807), cited by examiner, in view of Liou et al (US Pat. No. 6,580,437), cited by examiner.

With regards to claim 5, Register teaches all of that which is discussed above with regards to claim 1. Register does not teach that the transcript information comprises closed-captioned text. Liou teaches that the closed-captioning text is used to

segment and classify videos (see the Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the closed-captioning processing as taught by Liou into the system of Register, in order to allow for processing of text information based on the closed-captioning information which is already present in the program signal and therefore more accessible and standard.

With regards to claim 9, Register teaches all of that which is discussed above with regards to claim 6. Register does not teach that the transcript information comprises closed-captioned text. Liou teaches that the closed-captioning text is used to segment and classify videos (see the Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the closed-captioning processing as taught by Liou into the system of Register, in order to allow for processing of text information based on the closed-captioning information which is already present in the program signal and therefore more accessible and standard.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wei et al disclose a system for integrating visual, audio, and text analysis for news video in order to classify a story when transcripts and closed-captioning are not available.

Wactlar et al (US Pat. No. 5,835,667) disclose a method and apparatus for creating a searchable digital video library utilizing time-stamps and text information to classify, store, and search the library.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R Shannon whose telephone number is 703-305-6955. The examiner can normally be reached on M-F 7:30-5:00, alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 703-305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael R Shannon
Examiner
Art Unit 2614

Michael R Shannon
October 5, 2004

JOHN MILLER
SUPERVISORY PATENT EXAMINER
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